

Motivated by a desire to achieve protection from the elements, the long-standing Soviet practice has been to provide garage-like shelters for the tanks, armored personnel carriers, and support vehicles organic to its combat formations wherever and whenever it is convenient to do so. At present, in the judgment of the DIA experts who monitor such matters, Warsaw Pact cantonments already contain sufficient numbers of such structures to house all of the Soviet and Eastern Europe armored combatants, and a significant proportion of the trucks and other support vehicles, now in residence at those facilities. At any given time, eighty percent or more of the armored combat vehicles would be expected to be inactive and under-roof, while the remaining one-fifth was engaged in routine training exercises.

The sheltering available to Warsaw Pact frontal aviation forces is more extensive still. Since 1968, the Soviets have constructed enough blast resistant "hangerettes" to accommodate ninety percent of the NATO-oriented tactical fighters bombers on a one-for-one basis. Since many of these structures are capable of accepting several fighter-bomber sized aircraft, practical sheltering capacity holds some slack which could be used to accommodate wartime reinforcements. Similar arrangements do not, however, exist for transport aircraft, or for the bombers and reconnaissance types assigned to long-range aviation forces, none of which ordinarily reside in covered structures.

Although emplaced for different purposes, both the environmental shelters housing the major equipment of the land forces and the bomb shelters protecting the tactical combat aircraft serve very effectively

DIA review(s) completed.

25X1

Approved For Release 2004/01/20 : CIA-RDP83M00171R001100070001-8

Approved For Release 2004/01/20 : CIA-RDP83M00171R001100070001-8

TAC AIRCRAFT

	FT	AT2
MIG 21	24 x 52 =	1500
MIG 23	47 x 55 =	3700
SU 17	46 x 42 =	2900

3500

MAC AIRCRAFT

AN-12	125 x 110 =	16,500
AN-22	212 x 110 =	48,300

SAC AIRCRAFT

TU-16	110 x 120 =	15,900
TU-95	159 x 155 =	29,600

$$\frac{(115/15.9) + (185/29600)}{600} \left( \frac{2}{3} \right) = 13.4$$

SSBN

Delta II	500 x 36 =	21,600
Delta T	426 x 35 =	17,900

20,000

Atto. A Subs

November	326 x 32 =	14,500
----------	------------	--------

15,000

TANKS, APES + TRUCKS (metric)

AT2

T54/55	<sup>9.02</sup> 6.45 x 3.27 =	280
T62	<sup>10.1</sup> 7.4 x 3.3 =	320

BMP-1	6.75 x 3.00 =	260
(Tracked)		
BTR-50	6.83 x 2.32 =	200
(Wheeled)		
BTR-60	7.56 x 2.82 =	280

300

TRUCKS	7 x 2.5 =	230
--------	-----------	-----

250

1,190,000 1.2

11

VSSR Mechanized Infantry

288 tanks @ 300 ft<sup>2</sup>

300 APCs @ 250 ft<sup>2</sup>

2500 Trucks @ 200 ft<sup>2</sup>

2.12 million ft<sup>2</sup> @ 7.00 = 14.84

STA

STAT

1740

R.

STAT

019

Board

150  
200

STAT

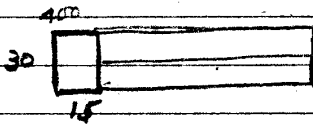
STA

Rough Estimate

Proposed:

- Extreme light weight.
- Minimal ~~at~~ frame, open on sides
- Corrugated Metal roof
- No internal supports
  - 400 - 500 sq ft.
  - 2000 - 2500 sq ft.
- Large Quantities

8-10 }



INVENTORY

AIRY/ST  
SHELTERED

TO BE  
SHELTERED

50 x 50 = 2500 ft<sup>2</sup>

120

STA

Frontal War  
PVO + Transport

SECRET

25X

Frontal

SAR - Hungary	680	94%	3/A
SAR - Poland	280	94%	
Check	80	51%	
Hungary	280	100%	

Size B-(3) finished

1250 X2

✓ Penzigrad	3100	93%	
✓ Batis	280	83%	
✓ Calloway	180	55%	
✓ Carpathian	240	78%	
✓ Lesca	230	100%	
✓ Trans Hungary	240	92%	
Moscow	20	15%	
✓ Ikin	10	25%	
X Fark?	40	38%	
X Central	210	82%	
X Trans Balkan	360	73%	-182%
X Dan E. 1	380	90%	

~~SECRET~~

Bulgaria	190
Check	310
E Hungary	130
Hungary	
Poland	170
Romania	

Total 2940 - incl PVO.

Motivated by 1967 Arab-Israeli War



NO 8/114

II

WP NIE

228 ground force ammunition depots in C. Europe & USSR west of the Urals

Containing 1300 medium tanks.

25X

VEHICLES

NUMBER

70% SHELTERED

TANKS

APCs

Eastern Europe, USSR W of Urals

TRUCKS

AIRCRAFT

TACTICAL

AIRLIFT

STRATEGIC

{

LBA - revealed = No evidence of substantive concealment goals -

SUBMARINES

SSBNs

ATTACK

ult for AOB.

25X

Ground Forces:

90% protective shelter tanks + APCs in forward areas

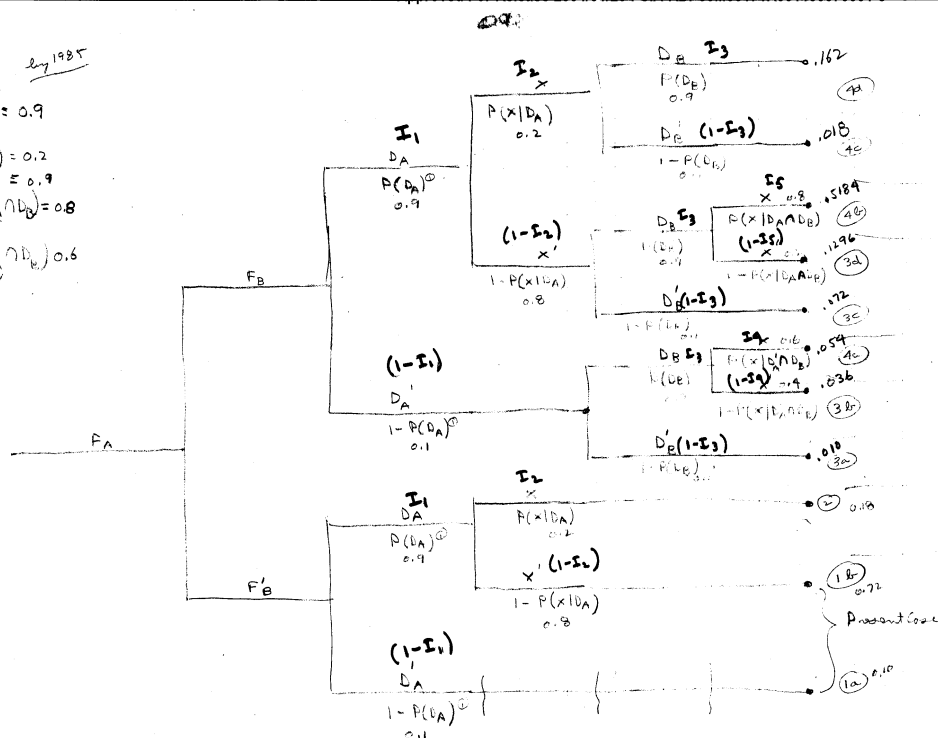
Most in forward areas are already sheltered

K1

all Soviet aircraft are protective sheltered in  
forward areas (90% sheltered)

25X

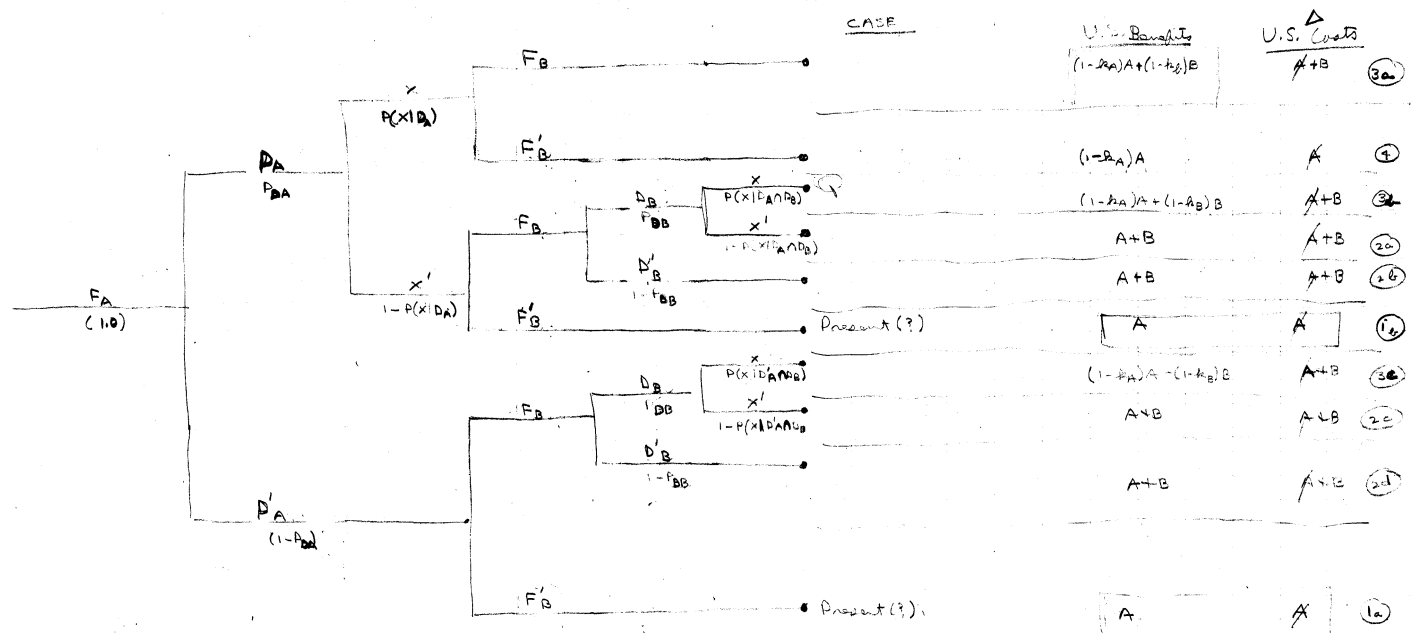
- ①  $P(D_A) = 0.9$
- ②  $P(X|D_A) = 0.2$
- ③  $P(D_E) = 0.9$
- ④  $P(X|D_A \cap D_E) = 0.8$
- ⑤  $P(X|D'_A \cap D_E) = 0.6$

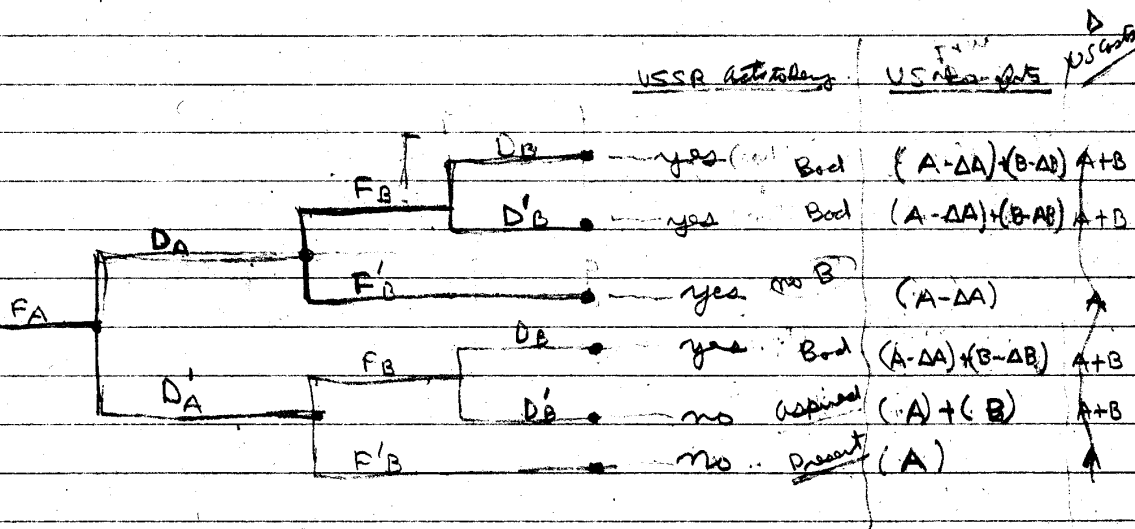
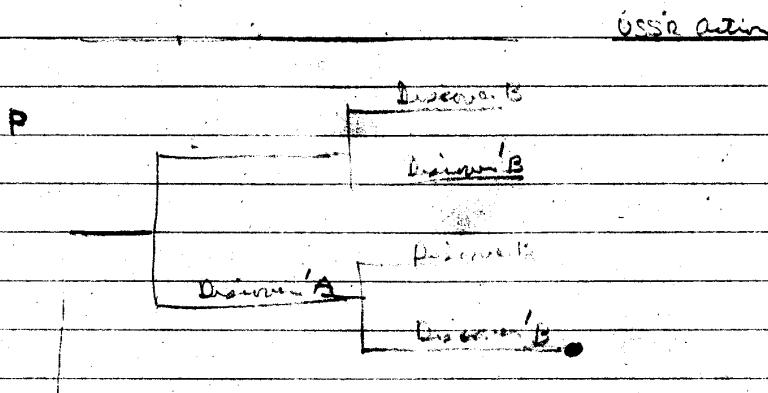
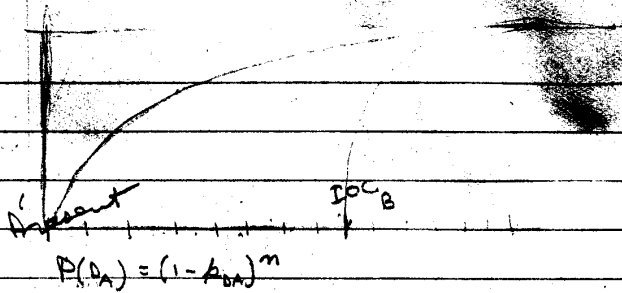


<u>U.S. Benefits</u>	<u>Δ U.S. Costs</u>	<u>Expected Payoffs</u>
$(1-k_3)(k_1) + (-k_4)(k_2-k_1)$	B	
$k_1 \quad 0.22$	B	
$k_1 \quad 0.23$	B	
$k_2 \quad 0.7$	B	
$k_2 \quad 0.7$	B	
$(1-k_3)(k_1) + (-k_4)(k_2-k_1)$	B	
$k_2 \quad 0.7$	B	
$k_2 \quad 0.7 \quad C_A + \Delta C_{AB}$	B	
$(1-d)C_A + (1-k_3)(k_1) \quad 0.25$	-	0.095
$C_A \quad 0.5$	-	0.260
		0.05

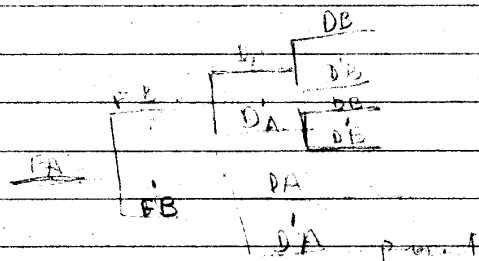
- (6)  $A_1$ : How well can A satisfy the I&W mission? (value of 0 to 1) <sup>0.5</sup>
- (7)  $A_2$ : How well would I&W mission be satisfied if B was added to existing A capability? (0 to 1) <sup>0.7</sup>
- $(A_2 - A_1)$ : Marginal contribution of B <sup>0.2</sup>
- (8)  $A_3$ : How much would USSR countermeasures degrade present satisfaction? (0 to 1) <sup>0.5</sup>
- (9)  $A_4$ : How much would USSR countermeasures degrade contribution of system B? (0 to 1) <sup>(0.8)</sup>







$R(D_A) = f(t) = (1 - A_{DA})^m$



$P(D_A)$  = Probability USSR has acquired appreciation of mission and capabilities of System A.

$$P(D_A) = f(t) = P_{AD} + (1 - P_{AD}) [1 - (1 - p_A)^{t=m}]$$

where:  $n$  = number of months in period being considered (input)

$p_A$  = probability  $D_A$  occurs in any given month of system A operations (input)

$P(D_B)$  = Probability USSR has acquired appreciation of mission and capabilities of system B

$$P(D_B) = f(t) = 1 - (1 - p_B)^{t=t_B}$$

where:  $t_B$  = time (months in future) that system B becomes operational

$P(X|D_A)$  = Probability that USSR implements countermeasures upon discovering System A.

$P(X|D_B)$  = Probability that USSR implements countermeasures upon discovering System B.

$A$  = Contribution of system A to I+V mission (in absence of USSR countermeasures)

$B$  = Contribution of system B to I+V mission

$R_A$  = Degradation of system A contribution resulting from countermeasures

$R_B$  = Degradation of system B contribution resulting from countermeasures

$\$$  75    +150    52  
 $\$$  125    65

$$A - \Delta A + B - \Delta B = C_A + C_B$$

$$A = C_A$$

$$\cancel{A} - \Delta A + B - \Delta B - \cancel{C_A} - C_B = \cancel{A} - \cancel{C_A}$$

$$(B - \Delta B) - \Delta A = C_B$$

$$P_A B + (1 - P_A) B = C_B$$

Is contribution of B post-shelting less loss of contribution of A as a result of shelting greater than cost of introducing B?

